REMARKS

Status of case

Claims 1-5 and 8-41 are currently pending in this case.

Executed 1449 Form

Applicants submitted an information disclosure statement on January 31, 2000. For the convenience of the Examiner, applicants include a copy of the PTO 1449 form which was submitted with the information disclosure statement. Applicants request that the enclosed form be marked as considered.

Rejections under 35 U.S.C. §103

Claims 1-5 and 8-41 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 6,343,277 (Gaus et al.) in view of U.S. Patent 6,047,274 (Johnson et al.) and "CellNet Data Systems" web site content of April 28, 1998.

Claims 1-5 and 8-26:

None of the cited references teach or suggest determining a clearing price after dispatch of services, as recited in claim 1. See "calculating a clearing price for the dispatched market services". In one aspect of the invention, "the spot price is determined 'ex-post', i.e., after the dispatch process. The final clearing prices in the pool are determined by what actually happens on the trading day, not what was projected at the time the original schedule was published." Pg. 7, lines 19-22. Both the Gaus and Johnson references teach that the price is determined before dispatch of services. See Gaus, Col. 1, lines 31-48; Johnson, Col. 15, lines 53-67. Similarly, the CellNet reference does not teach or disclose determining a clearing price after dispatch.

Moreover, none of the cited references teach or suggest calculating a clearing price for the dispatched market services based on a real time condition. As discussed in the application, the system operator may forecast what the system load should be for a specific time period in the following day. For example, the system operator may forecast for hour 10 on the following day a total system load of 500 MWh based on historical data, the weather forecast, etc. See pg. 8, lines 3-5 of the application. Based on the forecast, market service providers, such as generation units, may submit supply side bids and consumers may submit demand side bids. On the actual trading day, the system operator may determine that a real time condition is different from the

collected bids. As merely one example, the system operator may determine that the real-time load is greater than forecasted. Specifically, the system operator may determine for hour 10 that the real-time load is actually 600 MWh instead of the forecasted 500 MWh. See pg. 8, lines 15-16 of the application. Or, the system operator may determine that one of the market service providers that submitted a bid is unable to provide services. For example, Generation Unit C may be shut down for emergency maintenance, resulting in the remaining generation units to provide service. See pg. 8, lines 17-18 of the application. These real-time conditions may be determined for the predetermined interval ("determining at least one real time condition for the predetermined time interval that is different from at least one quantity of the supply side bids or quantity of the demand side bids"). The real-time condition may affect the market services dispatched ("dispatching market services for the predetermined time interval based on the real time condition"), the clearing price calculated ("calculating a clearing price for the dispatched market services"), and the settlement calculated ("calculating settlement information based upon the clearing price calculated").

As acknowledged in the Office Action, neither the Gaus or Johnson references disclose any teachings regarding pricing based on real-time conditions. Moreover, the CellNet reference does not teach calculating a clearing price based on real-time conditions. The CellNet reference discloses "Real Time Pricing," as shown on page 3. However, the "Real Time Pricing" is directed to providing a price to a customer in real time. Further, the CellNet reference discloses that outage reports may be produced in "real-time," as shown on page 5. Again, this merely teaches that failure reports may be provided to the customer in real time.

The claims do not recite providing a price to the customer in real-time or providing the customer with failure reports in real time. Rather, the claims recite calculating a clearing price based on real-time conditions. Further, merely providing a price to the consumer in real time is far different from determining what the price should be based on real time conditions. Therefore, claim 1, and claims 2-5 and 8-26 which depend on claim 1, are patentable over the cited art.

Claims 27-41:

As disclosed in the present application, an economic merit order may be determined. In one aspect, the economic merit order is determined by stacking the bids from lowest price to highest price. See page 7, lines 26-29. An example of an economic merit order is shown in Table 1 of page 8 of the application, reproduced below:

QUANTITY	PRICE	ASSET
100 MWh	$50/MWh	Gen. Unit C
200 MWh	$20/MWh	Gen. Unit B
150 MWh	$15/MWh	Gen. Unit B
50 MWh	$10/MWh	Gen. Unit C
50 MWh	$10/MWh	Gen. Unit A
200 MWh	$0/MWh	Gen. Unit B
100 MWh	$0/MWh	Gen. Unit A

As discussed in the present application, the economic merit order may then be used for dispatch of services. For example, page 8, lines 3-10 of the present application states the following:

> The day ahead of the trading day, the system operator forecasts that for the next day the total system load for hour 10 will be 500 MWh based on historical data, the weather forecast, external contract sales to other power pools, etc. It can be seen from Table 1 that for supply to match demand, the 500th MWh will be provided by Unit B at a cost of $15. This forecasted clearing price allows customers to guess what their position might be in the market and hedge their risk with short-notice contracts, for example. The system operator also publishes a schedule of economic merit order for the units. This commits Unit A to run 150 MWh, Unit B to run 300 MWh, and Unit C to run 50 MWh.

Thus, services forecasted to be dispatched may be based on the economic merit order. In the example given above, the amount of services forecasted to be dispatched for Units A, B, and C may be determined based on the economic merit order.

Further, the amount of services dispatched in real time may be based on economic merit order. Page 8, lines 15-19 of the present application states the following:

> On hour 10 of the actual trading day, the system operator determines that the real-time load is actually 600 MWh instead of 500 MWh. Perhaps there are more people running their air conditioner than this time last year or, perhaps, Gen Unit C has been shut down for emergency maintenance. This means that the system operator orders Gen Unit A to provide 150 MWh, and Gen Unit B 450 MWh.

In the example given above, real-time conditions (such as a different load than that projected or a plant which is off line) may change the forecast for the dispatch of services. The economic merit order thereby allows for determining which services will be dispatched given the real-time conditions.

Claims 27, 35, 40, and 41 recite an "economic merit order", as shown in the following:

claim 27: "the bid component determining an economic merit order for at least some of the bids from the energy services providers".

claim 35: "(c) determining an economic merit order for at least a portion of the supply side

bid information" and

> "(e) scheduling the operation of units that provide the market services according to the bid and contract information collected in steps (a) and (b), according to the real time condition, and according to the economic merit order"

claim 40: "code for determining an economic merit order for at least a portion of the supply side bids"

> "code for scheduling operation of units that provide the market services for the predetermined period according to the economic merit order"

claim 41: "determining an economic merit order for at least some of the supply side bids"; "dispatching market services for the predetermined period based on the real time condition and the economic merit order".

As shown above, claims 27, 35, 40 and 41 recite determining an economic merit order for the bids. Further, claims 35, 40 and 41 recite scheduling operation or dispatching market services based on the economic merit order.

The Gaus, Johnson, and "CellNet Data Systems" references do not disclose, or even suggest, the determining an economic merit order, or the use of an economic merit order in dispatching services. For example, the Gaus reference merely teaches ranking bids based on a "high-low" delta for purposes of determining a price. Col. 5, lines 57-60. However, there is no teaching that the bids are ranked based on economic merit order, or that the dispatch of the energy services is based on the economic merit order. Similarly, Johnson fails to teach or even suggest any use of an economic merit order.

Further, claim 27 recites a settlement component that "determines at least one real time condition for the predetermined time interval that is different from at least one of the submitted bids" and that "determines an equal energy services clearing price . . . based on the real time condition for the predetermined time interval". As discussed above, the cited references, including the Johnson and CellNet references, fail to teach or suggest calculating the clearing price based on a real-time condition. Moreover, claims 28-34, which ultimately depend on claim 27, distinguish over the cited references for at least the reasons discussed.

Similarly, claim 35 recites determining real time conditions and calculating the clearing price based on real time conditions. See "determining an economic merit order for at least a portion of the supply side bid information" and "the clearing price is a price for a supply side bid at which quantities for supply side bids equals the market services deployed in step (f)". Claim
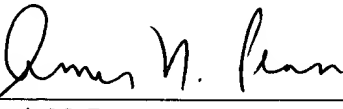
35 also recites that the clearing price determined after dispatch of the services ("the clearing price is a price for a supply side bid at which quantities for supply side bids equals the market services deployed in step (f)"). As discussed above, none of these limitations is taught or suggested in the cited art. Therefore, claim 35 as currently written distinguishes over the cited references. Moreover, claims 36-39, which ultimately depend on claim 35, distinguish over the cited references for at least the reasons discussed.

Likewise, claims 40 and 41 recite a determination of a real time condition and calculation of the clearing price based on real-time condition for the predetermined interval. Claim 41 further recites calculating the clearing price after dispatch of services. For the reasons discussed above, claims 40 and 41 distinguish over the cited references.

SUMMARY

Applicants submit that based on the foregoing remarks, the rejections have been traversed, and that the claims are in condition for allowance. Should there be any remaining formalities, the Examiner is invited to contact the undersigned attorneys for the Applicants via telephone if such communication would expedite this application.

Respectfully submitted,

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